Jordan University of Science and Technology

Faculty of Engineering

Electrical Engineering Department

EE310 Electric Circuits (2)
Summer Semester 2019-2020

Course Catalog
3 Credit Hours. Average power and RMS values. Polyphase circuits. Complex frequency. Frequency response. Magnetically coupled circuits. General two-port networks. Solving circuit problems using Laplace transform. Introduction to electric filters and Bode-plot.

Text Book	
Title	Fundamentals of Electric Circuits
Author(s)	C.K. Alexander and M.N.O. Sadiku
Edition	5th Edition
Short Name	Ref#1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref#2	Engineering Circuit Analysis	1- W. H. Hayt, Jr., J. E. Kemmerly, and S.M. Durbin	8th Edition	
Ref#3	The Analysis and Design of Linear Circuits	R. E. Thomas and A. J. Rosa	5th Edition	
Ref#4	Basic Engineering Circuit Analysis	4- J. David Irwin	7th Edition	

Instructor	
Name	**Dr. Saher Albatran**
Office Location	-

Office Hours	Sun : 11:30 - 13:00 Mon : 11:30 - 13:00 Tue : 11:30 - 13:00 Wed : 11:30 - 13:00
Email	saalbatran@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Mon, Tue, Wed : 08:30 - 10:00 Room: منصة الكترونية

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
242601	EE260 Signal And Systems Analysis	Prerequisite / Pass
242100	EE210 Circuits (1)	Prerequisite / Pass

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Sinusoids and Phasors. Sinusoidal Steady-State Analysis	From **Ref#1**
Weeks 2, 3, 4	AC Power Analysis. Average Power and RMS Values	From **Ref#1**
Weeks 5, 6, 7, 8	Three-Phase Circuits	From **Ref#1**
Weeks 9, 10, 11	Magnetically Coupled Circuits	From **Ref#1**
Weeks 12, 13	Frequency Response	From **Ref#1**
Week 14	Laplace Transform (review)	From **Ref#1**
Week 15	Applications of the Laplace Transform	From **Ref#1**
Week 16	Two-Port Networks	From **Ref#1**

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
perform power calculations in single & three phase circuits [20ABET1, 5ABET2]	25%	
perform ac analysis of three phase circuits [15ABET1]	15%	
perform ac analysis of magnetically coupled circuits [15ABET1, 5ABET2]	20%	
perform transient analysis of circuits using the Laplace transform technique [5ABET1, 5ABET2]	10%	
learn complex frequency theory [10ABET1]	10%	

learn frequency response applications [10ABET1, 5ABET2]	15%	
learn two-port network analysis [5ABET1]	5%	

Relationship to Program Student Outcomes (Out of 100%)						
ABET1	ABET2	ABET3	ABET4	ABET5	ABET6	ABET7
80	20					

Evaluation	
Assessment Tool	**Weight**
First Exam	20%
Online Activities	30%
Final Exam	50%

Policy	
First Exam	20%
Online Activities	30%
Final Exam	50%

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